MEMORANDUM

SUBJECT: BEAD Review of Cotton Council's Benefits Assessment of Tribufos Based on Quality and Yield Losses

FROM: Jihad Alsadek, Economist
Economic Analysis Branch

George W. Keitt, Jr., Plant Physiologist
James Saulmon, Biologist
Herbicide and Insecticide Branch

Biological and Economic Analysis Division (7503C)

TO: Anne Overstreet/Betty Shackleford
Reregistration Branch III
Special Review and Reregistration Division (7508C)

We have reviewed the document submitted by Dr. Frank Carter of the National Cotton Council entitled Economic Impact of Using Tribufos Replacements on Cotton Yield and Market Value of the Fiber. We find that the descriptions of the role of defoliants in cotton production, and of the performance of at least some of the alternatives, fits with what we know about them. The scenarios presented as the consequence of loss of tribufos are logical, and the values used for cotton acres grown and treated reflect published USDA information (1,2,3). However, the values for dockage for quality losses and for yield losses are based on expert opinion, as are those for the apportionments of acres to the various levels of loss predicted. As we cannot in the limited time available to us seek to verify independently the precision of these estimates, BEAD can neither confirm nor refute the accuracy of this loss estimate.

While the analysis was done using national totals, it is known that both yields per acre and usage of different chemicals, including tribufos, vary from region to region. The regions using tribufos most heavily are the Mississippi Delta states and the Southeastern states, so the impacts there will be greatest. Impacts in Texas are expected to be lower per acre because productivity there averages a

bale per acre. California and Arizona produce about 2.4 bales per acre, so impacts per acre could be larger than in other regions, though fewer acres are treated.

References:

1. Agricultural Statistics 2000. USDA/NASS (covers 1997-1999)
2. Doane's Agricultural Report, 1997
3. Agricultural Chemical Usage, 1999 Field Crops Summary. USDA/NASS, May, 2000.

U.S. COTTON ACRES BY REGION AND STATE, 1997-99, AND SUMMARIES OF PERCENT OF U.S. ACRES, BALES, TRIBUFOS USAGE AND RATES
(Agricultural Statistics 2000, USDA/NASS (covers 1997-99) and Agricultural Chemical Usage; 1999 Field Crops Summary, USDA/NASS

NASS Ag Chem Usage, 1999 Summary, May 2000 (2)

REGION	cotton type	1997		1998		1999		1997-w average	1997-99 ave. pct. of us	1997-99 ave. pct. of US	1997-99 ave. yield (1)	1999 percent of us	1999 wtd. ave. rate
state		(000)		(000)		(000)		(000)	acres	bales	bales per acre	tribufos usage	(lb ai/A)
FAR WEST													
AZ	upland	324		248		264							
	pima	22		15.5		9.5							
	total		346		263.5		273.5						
CA	upland	875		620		605							
	pima	184		180		239							
	total		1059		800		844						
region total			1405		1063.5		1117.5	1195	10	17	2.4	10	1.4
SOUTH CENTRAL													
NM	upland	66		60		67							
	pima	11		7.3		7.5							
	total		77		67.3		74.5						
TX	upland	5200		3300		5100							
	pima	32		32		32							
	total		5232		3332		5132						
OK	upland		190		120		150						
KS	upland		10		16.5		28						
region total			5509		3535.8		5384.5	4810	39	30	1	11	0.51
DELTA													
AR	upland		965		900		960						
LA	upland		650		525		610						
MS	upland		970		940		1180						
MO	upland		390		357		375						
TN	upland		480		445		565						
region total			3455		3167		3690	3437	28	30	1.5	57	0.68
SOUTHEAST													
AL	upland		442		475		560						
FL	upland		99		80		106						
GA	upland		1425		1280		1300						
SC	upland		286		286		315						
NC	upland		685		705		800						
VA	upland		100		91		108						
region total			3037		2917		3189	3048	24	23	1.2	22	0.81
TOTAL US			13406		10683.3		13381	12490.1	101	100	1.32	100	0.76

(1) Derived by dividing regional average bales by regional average acres; Ag. Statistics 2000 data.

(2) States not included in this survey are KS, NM, OK, MO, FL, SC, and VA; each has minor acreage in its region.